

# Notice of Allowability

Application No.

09/879,466

Examiner

Henry S. Hu

Applicant(s)

PICKERING ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment of 11-24-2003.
2. ☒ The allowed claim(s) is/are 16-33.
3. ☒ The drawings filed on 24 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in three telephone interviews with **Roger P. Glass (tel. 703 379-8443) on June 14, 2004** to cancel non-elected Claims 1-15, as well as to amend newly added independent Claim 30 by incorporating the limitation of silica with aggregate form:

**Claims 1-15 are cancelled.**

**Claim 30 at line 3** please insert the phrase of "in aggregate form," between the word "silica and the word "surface"

### **DETAILED ACTION**

2. Applicants' amendment and declaration filed on November 24, 2003 were both received.

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**Claims 16 and 26 were amended, non-elected Claims 1-15 were canceled, and new Claims 30-33 were added.** Both Claims 16 and 30 were narrowed down to use only amorphous silica in aggregate form. Therefore, new independent Claim 30 relates to independent Claim 1 with a specific organaminosilane such as from silazanes, while other independent Claim 24 is a process claim to prepare a surface-contacting member. The examiner accepts new set of drawing with Fig. 1-3 in two sheets. The examiner thereby withdraws the drawing objection in the previous Office Action dated July 31, 2004. **Claims 16-33 are pending now.**

2. Claim rejections under 35 USC 102 and 103 in the previous Office Action dated July 31, 2003 are now removed for the reasons given in paragraphs 3-9 thereafter.

***Allowable Subject Matter***

3. Claims 16-33 are allowed.
4. The following is an examiner's statement of reasons for allowance: The above claims 16-33 are allowed over the closest references:
5. The limitation of amended parent **Claim 16** of present invention relates to *a composition comprising (A) at least one **fluoroelastomer**, and (B) amorphous silica in aggregate form, surface treated with at least one organoaminosilane.* Parent **Claim 24** relates to a process of preparing a surface contacting member coating composition from Claim 16 with polyhydroxy

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*curable system; while newly added parent **Claim 30** relates to the limitation of Claim 1 with a specific silazane. See other limitations of Claims 17-23, 25-29 and 31-33.*

6. In view of the Applicants' amendment, both parent **Claims 16 and 30** of present invention carry the specific limitation on "a composition comprising (A) at least one **fluoroelastomer**, and (B) amorphous **silica in aggregate form, surface treated with at least one organoaminosilane such as a silazane**", while other parent Claim 24 is a process of preparing a surface contacting member coating composition from Claim 16 **with polyhydroxy curable system**.

With respect to parent **Claim 16** in two **102 rejections for Claims 16-20**, Cole et al. only disclose the preparation of a composition obtained from dispersing surface-stabilized, **non-agglomerated silica** within a polymer (column 2, line 52-59). Although the polymeric rubber used can be a fluoroelastomer (column 13, line 11-20) and a **hydrophobating agent such as hexamethyl disilazane** with a catalyst such as **aminopropyl-trimethoxysilane** can be used together to modify the silica surface. However, the surface of **non-agglomerated silica** was stabilized thereby substantially preventing subsequent agglomeration of the silica. Additionally, the declaration sent by the Applicants has shown the time to reduce to practice on January 18, 2000 or earlier to overcome the 102(e) date.

Winnik et al. only disclose the preparation of toner compositions containing (A) **colored silica particles having dyes covalently bonded to the particle surfaces through silane**

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**coupling agents** (abstract, line 1-4), and (B) **a fluoropolymer** as the carrier particles as disclosed in US Patent Nos. 3,526,533, 3,849,186, and 3,942,979. Winnik et al. further disclose various silane coupling agents include aminialkyl silanes, aminoalkylaryl silanes, and N, N-(2'-hydroxyethyl)-3-aminopropyl-triethoxysilane. The surface of non-agglomerated silica was thereby stabilized with subsequent minimal or no agglomeration of the silica. Additionally, Winnik does not disclose or suggest using a fluoroelastomer as pointed by the Applicants in pages 17-18 of amendment.

With respect to parent **Claim 24** in **103 rejection for Claims 21-28**, both primary references, Cole or Winnik, are silent about including the claimed crosslinking agents to make a curable composition. Both secondary references, Grootaert or Chen only teach that fluorinated elastomers or polymers can be incorporated in a mixture including a polyhydroxy compound, an organo-onium compound and a metal oxide or hydroxide an acid acceptor such as MgO and Ca(OH)<sub>2</sub> to become curable due to a crosslinking mechanism. However, **a linking motivation is lacked due to different applications as pointed out by the Applicants in pages 20-22 of amendment**. Therefore, none of the above references, alone or in combination, teaches or fairly suggests the present invention.

It is noted that newly added parent **Claim 30** is relating to the limitation of Claim 1 but with a specific silazane. Additionally, the present invention has shown in examples along with some comparative examples for unexpected results in obtaining a surface contacting member coating composition as claimed in Claims 16 and 24 with polyhydroxy curable system (see pages

39-53 for **examples 1-8 along with its control examples 1-10, and Tables 1-2**). Therefore, all the above-mentioned references, in combination or alone, does not teach or fairly suggest the limitations of present invention.

8. After further examination and search, the examiner found the following prior art did not teach the claimed limitation: **US Patent No. 6,221,943 to Hergenrother et al.** discloses a process to prepare a processable rubber stock comprising mixing an elastomer with amorphous silica filler and an alkoxysilane tetrasulfide compound (abstract, line 1-6; column 2, line 47 – column 3, line 62). No fluoroelastomer or a silica in the aggregate form or a polyhydroxy curable system is disclosed. Therefore, Hergenrother fails to teach or fairly suggest the limitation of present invention.

**US Patent No. 6,242,145 to Galloway et al.** discloses a process to prepare a toner comprising mixing a polymer binder with amorphous silica filler and a silazane compound (abstract, line 1-15; column 1, line 1-14). No fluoroelastomer or a silica in the aggregate form or a polyhydroxy curable system is disclosed. Therefore, Galloway fails to teach or fairly suggest the limitation of present invention.

9. The two key issues, the specific limitation on (A) “a composition comprising (A) at least one **fluoroelastomer**, and (B) amorphous **silica in aggregate form**, **surface treated with at least one organoaminosilane**” for Claims 16 and 30 as well as (B) using “a process of preparing a surface contacting member coating composition from Claim 16 **with polyhydroxy curable**

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**system**" for Claim 24, cannot be overcome by any or the combination of the above references, therefore, the present invention is novel.

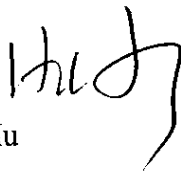
10. As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the above references to render the present invention anticipated or obvious to one of the ordinary skill in the art. Therefore, the three independent and parent **Claims 16, 24 and 30** are allowed for the reason listed above. Since the prior art of record fails to teach the present invention, the remaining pending dependent **Claims 17-23, 25-29 and 31-33** are passed to issue.

11. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

12. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Henry S. Hu whose telephone number is **(571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Henry S. Hu

June 14, 2004



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